RELATED APPLICATIONS

[001]   U.S. Patent Application Serial No. _10/036,133_ , filed on even date herewith in the name of Guy L. Steele Jr. and entitled "Floating Point System That Represents Status Flag Information Within A Floating Point Operand," assigned to the assignee of the present application, is hereby incorporated by reference.

DESCRIPTION OF THE INVENTION

Field of the Invention

[002]   The invention generally relates to systems and methods for indicating the status of a floating point value, and more specifically to systems and methods for indicating whether a result of a floating point operation is exact or inexact and preserving the status after a floating point calculation.

Background of the Invention

[003]   IEEE Standard 754 (hereinafter "IEEE Std. 754" or "the Standard") published in 1985 by the Institute of Electrical and Electronic Engineers, and adopted by the American National Standards Institute (ANSI), defines several standard formats for expressing values as a floating point number. In accordance with IEEE Std. 754, a floating point format is represented by a plurality of binary digits, or "bits," having the structure:

[004] $se_{msb} \cdots e_{lsb} f_{msb} \cdots f_{lsb}$

[005] where "msb" represents "most significant bit" and "lsb" represents "least significant bit." The bit string comprises a sign bit, s, which indicates whether the number is positive or negative. The bit string further comprises an exponent field

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